

# Making Choices: The Effects of Human Consumption

his lesson provides students with the opportunity to apply the ecological principles they have learned about in this unit to realistic land use issues. Students review brief scenarios that propose specific changes in land use patterns. In each scenario, making the proposed change has advantages and disadvantages.

Students evaluate information on both sides of the issue and write a persuasive essay either supporting or opposing the proposed change.

In giving equal weight to both arguments, students must consider multiple viewpoints. Doing so helps

to develop an understanding of the variety of factors that influence decision making about land use patterns. In developing their persuasive essays, students draw on their knowledge of populations and energy transfer. They also consider the potential byproducts

of the proposed changes. In the end, they see that the type of change, the extent of change, and the byproducts resulting from change all contribute to the total effect of human use of natural systems.

## **Background**

Environmental issues are usually quite complex with many variables economics, ecology, personal values coming into play. To make informed choices about environmental issues, people must understand and weigh all perspectives. Even when people feel strongly about one side of an issue, understanding multiple perspectives helps them argue effectively for their position.

Not everyone has the same attitude towards the environment. Where some might see a stand of trees and want to preserve it as a park, others may prefer to harvest the lumber. Still others might see an opportunity to develop a new road or shopping center. Each potential use influences the ecosystem in a different way, and each has advantages and disadvantages. People making land use decisions need to consider immediate gains and

# **Learning Objective**

Provide examples of how the quantities of resources consumed, and quantity and characteristics of the resulting byproducts can affect natural systems.



long-term consequences for people and for the organisms living in the ecosystem in question.

Governments now require prepa-

ration of an environmental impact report

for most major developments. Such reports inform choices and help make sure that decision-makers consider and in some cases, prevent future consequences before development occurs. Still, land use choices affect the natural systems upon which people and all other living things depend.

Early in the country's history, land seemed unbounded and resources plentiful. As the human population increased, so did pressures to develop additional land. Land use regulations came about as people became aware that unrestricted use of land caused resource problems to develop. Water became polluted; habitat became spoiled; species became endangered, often as the unintended result of actions taken without adequate knowledge or consideration of their future effects.



# Toolbox



Students review realistic scenarios that propose changes in land use patterns. Working in pairs, students discuss both sides of their issue to develop an understanding of how use of resources affects natural systems. Then each student will write a persuasive essay, either supporting or opposing the proposed action.



Instructional Support

See Unit Resources, page 21

## **Prerequisite Knowledge**



- Students should understand ways in which organisms depend upon their habitat for survival. They must be able to discuss ways that human changes in the environment can affect organisms.
- Students should also understand that a persuasive essay is a form of a composition that: a. requires a clear position on a proposition, **b.** supports the position with organized and relevant evidence, and c. anticipates and addresses reader concerns and counterarguments.

# **Advanced Preparation**



#### Make copies:

Make copies as indicated in the Activity Masters section below.

#### Select editorial:

Review local newspapers (or gradelevel Reading-Language Arts instructional materials) and select an editorial that can serve as an example of a persuasive essay. Ideally, the editorial should address a local land use issue in the students' area



#### **Materials Needed**

#### **Visual Aids**

## **Duration**



**Activity masters:** See below



None provided, however teachers may want to make transparencies of the same editorials



**Preparation time:** 15 min. **Instructional time:** 90 min. (Two, 45-minute sessions)



Safety Notes None

# **Activity Masters**



**Persuasive Essay Self-Evaluation** Guide

Page 88 One per student



**Land Use Scenarios** 

Page 89 One set per class



**Persuasive Essay Peer & Teacher Evaluation** 

Page 97 One per class or one per student (optional)

# Procedures

#### Step 1

Have students read and discuss an editorial on a local land use issue. Discuss that an editorial is a type of persuasive essay. Ask students to summarize the issue discussed in the editorial. Discuss the advantages and disadvantages of the alternatives proposed in the editorial. Consider potential consequences for people and for other organisms affected by the proposed change in land use. Explain the need to consider consequences before making decisions about land use.

#### Step 2

Discuss with students the purpose of a persuasive essay such as an editorial. Note that the best persuasive essays:

- state a clear position on a proposition
- support the position with organized and relevant evidence
- anticipate and address reader concerns and counterarguments

Point out that controversies arise because people have different opinions and values. All perspectives on an issue have merit. Considering all viewpoints allows individuals to be confident about their own choices. It also helps them develop convincing arguments to support their views.

## Step 3

Distribute the **Persuasive Essay Self-Evaluation Guide** (Lesson 6 Activity Master) to each student. Explain that working in pairs, students will examine and discuss a land use scenario. Each student will write a persuasive essay that either supports the proposed action or opposes the proposed action. This worksheet is a checklist to guide their work and ensure they include all required parts. They will also use it to assess the quality of their work. They will submit this form to the teacher along with their assignment.

Review the elements listed on the rubric with the students.



#### Step 4

Pair students and distribute the Land Use Scenarios (Lesson 6 Activity Master). Give one scenario to each pair of students. Ask them to review their scenario and think through arguments that support and oppose the proposed land-use plans. Explain that although the scenarios are fictitious they represent realistic situations. (Note: Students may need assistance interpreting the details of their scenarios.)

Tell the students that the next day in class each of them will write a persuasive essay representing one of the perspectives. (Note: Students may choose to write from a perspective that that does not match their personal opinion.)

#### Step 5

Next day in class: instruct students to write their persuasive essays (Note: the writing style should match the 6th-grade standards for writing persuasive compositions 6.2.5.) Specifically instruct the students to include examples of how the quantities of resources consumed, and quantity and characteristics of the resulting byproducts can affect natural systems discussed in their scenario.

#### Step 6

Have a few volunteers read their persuasive essays aloud. (Note: allow students to take their work home if they want to revise their persuasive essays.)

Discuss some of the examples of how the quantities of resources consumed, and quantity and characteristics of the resulting byproducts can affect natural systems discussed in their scenario.

# Lesson Assessment

# Instructions

#### **Description:**

The EEI Learning Objective for Lesson 6 requires students to provide examples of how the quantities of resources consumed, and quantity and characteristics of the resulting byproducts can affect natural systems. Students will write a persuasive essay that either supports or opposes a proposed land use action.

#### **Instructions:**

#### For teachers:

See Steps 3, 4 and 5 in the lesson's Procedures. If appropriate, students can use the Persuasive Essay Peer & Teacher Evaluation (Lesson 6 Activity Master) to peer-assess their work before handing it in to the teacher for scoring.

## **Suggested Scoring**

#### **Scoring Method:**

Rubric for Assessing the Essay on Land Use

#### Scale:

- 4 Excellent
- 3 Very Good
- 2 Sometimes good
- 1 Needs Improvement